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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/622,432	07/21/2003	Kenji Niibori	03560.003335	4966

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EXAMINER	
RIELLEY, ELIZABETH A	

ART UNIT	PAPER NUMBER
2879	

DATE MAILED: 10/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/622,432	NIIBORI ET AL.	
	Examiner	Art Unit	
	Elizabeth A. Rielley	2879	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 August 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *17 August 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

Amendment filed 8/17/05 has been entered and considered by the Examiner. Claims 18-21 have been added. Currently, claims 1-21 are pending in the instant application.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-5, 7-12, 14-16, 18, and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Anderson et al (US 5811927).

In regard to claim 1, Anderson et al ('927) teach a vacuum container (abstract; column 2 lines 9-14) having a first substrate (130; figures 7 and 8; column 6 line 43 – column 9 line 19) and a second substrate (164) arranged so as to face each other as components comprising, within said vacuum container: a spacer (104) supported on the first substrate or the second substrate so as to maintain an interval between the first substrate and the second substrate (see figures 7 and 8), the spacer having a height extending in a first direction substantially perpendicular to planar surfaces of the first and second substrates and a length extending in a longitudinal direction substantially parallel with the planar surfaces

(see figures 7 and 8); and a supporting member (112) provided at a longitudinal end of the spacer (see figure 7) and fixing said spacer within the vacuum container without the spacer contacting the supporting substrate (130, see figure 7, a gap which is not numbered is made from supporting member 112).

In regard to claims 2 and 9, Anderson et al ('927) teach the spacer (104) is fixed to the substrate (130) where said spacer is disposed, via the supporting member (112) provided at said spacer (104) without contacting the substrate (gap, not numbered, made by supporting member 112; see figure 7) where said spacer is disposed (see figure 7).

In regard to claims 3, 4, 10, and 11, Anderson et al ('927) teach the supporting member (112) is connected to the substrate by means of a first connecting member (108 between substrate 130 and support member 112; see figure 8); an the supporting member (112) is connected to said spacer (102) by means of a second connecting member (108 between supporting member 112 and spacer 102; see figure 8).

In regard to claims 5 and 12, Anderson et al ('274) teaches electron emission elements (166; figure 8; column 8 lines 12-17) arranged on the first substrate (164); and an image display member (124) arranged on the second substrate (130).

In regard to claims 7 and 14, Anderson et al ('274) teaches the supporting member (114) is disposed outside of an electron emission region (column 3 lines 31-34; column 4 line 66 to column 5 line 3).

In regard to claim 8, Anderson et al ('927) teach a vacuum container (abstract; column 2 lines 9-14) having a first substrate (130; figures 7 and 8; column 6 line 43 – column 9 line 19) and a second

substrate (164) arranged so as to face each other (see figure 8) as components comprising, within the vacuum container: a spacer (104) supported on the first substrate or the second substrate so as to maintain an interval between the first substrate and the second (see figure 7 and 8), the spacer having a height extending in a first direction substantially perpendicular to planar surfaces of said first and second substrates and a length extending in a longitudinal direction substantially parallel with said planar surfaces (see figure 7); and a supporting member (112) provided at a longitudinal end of said spacer (see figure 7) and fixing said spacer within said vacuum container so as to provide a gap (not numbered; made from supporting member 112; see figure 7) between the spacer and the supporting substrate.

In regard to claim 15, Anderson et al ('927) teach a method for manufacturing a vacuum container (abstract; column 2 lines 9-14) having a first substrate (130; figures 7 and 8; column 6 line 43 – column 9 line 19) and a second substrate (164) arranged so as to face each other as components (see figure 8), and a spacer (104) disposed at the first substrate or the second substrate within the vacuum container (see figures 7 and 8), the method comprising the steps of supporting the spacer on the first substrate or the second substrate (supporter member 112) so as to maintain an interval between the first substrate and the second substrate (see figure 8), the spacer having a height extending in a first direction substantially perpendicular to planar surfaces of the first and second substrates and a length extending in a longitudinal direction substantially parallel with the planar surfaces (see figure 7); and providing a supporting member (112) at a longitudinal end of the spacer (see figure 7) and fixing the spacer within the vacuum container so as to provide a gap (not numbered; made from supporting member 112; see figure 7) between the spacer and the supporting substrate.

In regard to claim 16, Anderson et al ('274) teaches a method for manufacturing an image display apparatus having a vacuum container (column 2 lines 9-14; column 1 lines 6-8) having a first substrate

(164) and a second substrate (130) arranged so as to face each other (see figure 8) as components, and a spacer (104), electron emission elements (166) on the first substrate (164), and an image display member (124) on the second substrate (130) that are disposed within the vacuum container, said method comprising the step of: manufacturing the vacuum container according to a method according to claim 15 (see above).

In regard to claims 18 and 19, Anderson et al ('274) teach a supporting member (186; figure 12; column 10 line 24 to column 11 line 34) including a groove (188) for receiving a longitudinal end of a spacer.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 6, 13, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson et al (US 5811927) in view of Tagawa et al (US 5734224).

Anderson et al ('927) disclose all the limitations set forth as described above, except the spacer is disposed on wires for driving said plurality of electron emission elements arranged on the first substrate. Tagawa et al ('224) teach that a spacer is disposed on wires for driving said plurality of electron emission elements arranged on a first substrate in order to avoid obstructing the electron beams emitted form the emitting devices (column 16 lines 11-26). Hence, it would have been obvious at the time of the invention

to one of ordinary skill in the art to combine the field emitting device of Anderson et al ('927) with the arrangement of the spacer located on the connecting wires as taught by Tagawa et al ('224). Motivation would be to avoid obstructing the electron beams emitted form the emitting devices.

Claims 20 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson et al (US 5811927) in view of Fushimi et al (US 5936343).

Fushimi et al ('343) teach a plurality of electron emission elements include a cold cathode (claim 6). Motivation to combine would be to obtain electron emission at a lower temperature (column 2 lines 27-40).

Response to Arguments

In regard to claims 1-5, 7-12, and 14-16, Applicant's arguments filed 8/17/05 have been fully considered but they are not persuasive.

In regard to Applicant's argument that Anderson et al fails to disclose a supporting member provided at a longitudinal end of the spacer, the Examiner respectfully disagrees. Anderson teaches a spacer (104) having a height extending in a first direction substantially perpendicular to a planar surface of said first and second substrates and a length extending in a longitudinal direction substantially parallel with said planar surfaces, and supporting member (112) provided at the longitudinal end of the spacer, that is the end of the spacer that is extending parallel with the substrate (see figure 7).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elizabeth A. Rielley whose telephone number is 571-272-2117. The examiner can normally be reached on Monday - Friday 7:30 - 4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimeshkumar Patel can be reached on 571-272-2457. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

10/24/05
MARICELI SANTIAGO
PRIMARY EXAMINER

Elizabeth Rielley

Examiner
Art Unit 2879